

## Title (en)

Method of manufacturing the end connectors of a battery by the cast-on-strap process (COS)

## Title (de)

Verfahren zur Herstellung der Endpolen einer Batterie durch Brückenangussverfahren (COS)

## Title (fr)

Méthode de fabrication des connecteurs terminaux d'une batterie par procédé de moulage de barres de connection (COS)

## Publication

**EP 0887873 A3 20000426 (EN)**

## Application

**EP 98201996 A 19920909**

## Priority

- EP 92920185 A 19920909
- US 75744791 A 19910910

## Abstract (en)

[origin: EP0887873A2] A method of manufacturing a battery which comprises a first electrical plate (20; 120; 310) having a first electrical polarity, a first electrical battery terminal (26;160), and a first end connector (24; 162) for establishing electrical communication between said first electrical plate (20; 120; 310) and said first electrical battery terminal (26; 160), said first end connector (24; 162) being connected to said first electrical battery terminal (26; 160) and cast onto said first electrical plate (20; 120), characterised in that said casting is carried out by immersing an edge of said first electrical plate in a mould containing molten metal which has a heat content substantially such that the addition of heat will result in an increase in temperature of the molten metal whilst the subtraction of heat will result in the formation of a mixture of solid and molten metal, whereby by drawing a graph in which the ordinate represents the temperature of said metal and the absciscae represents heat input so as to define a first portion (A) in which the temperature of the solid metal rises as heat is added to it, followed by a plateau portion (B) where heat is utilised to melt the solid metal without materially increasing the temperature of the solid/liquid mixture, and a third portion (C) having an incline and representing an increase of the temperature of the melt as heat is added to it, the plate is submerged in the molten metal when its heat content is such, that it corresponds to a point, which is close to the boundary between the plateau portion (B) and the incline of the third portion (C). <IMAGE> <IMAGE>

## IPC 1-7

**H01M 2/26**; **H01M 2/28**

## IPC 8 full level

**H01M 10/04** (2006.01); **H01M 10/12** (2006.01); **H01M 10/28** (2006.01); **H01M 50/541** (2021.01); **H01M 4/68** (2006.01); **H01M 6/10** (2006.01)

## CPC (source: EP US)

**H01M 10/0409** (2013.01 - EP US); **H01M 10/125** (2013.01 - EP US); **H01M 10/286** (2013.01 - EP US); **H01M 4/68** (2013.01 - EP US); **H01M 6/10** (2013.01 - EP US); **H01M 10/0413** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP); **Y10T 29/49115** (2015.01 - EP US)

## Citation (search report)

- [A] GB 582654 A 19461122 - CHARLES DOUGLAS GALLOWAY
- [A] US 3915218 A 19751028 - FARMER JOHN E
- [A] GB 1136009 A 19681211 - TIEGEL MFG COMPANY
- [DA] WO 9108596 A1 19910613 - CAL TEC CORP [US]
- [DA] DE 2024172 A1 19711202 - BOSCH GMBH ROBERT
- [DA] PATENT ABSTRACTS OF JAPAN vol. 012, no. 115 (E - 599) 12 April 1988 (1988-04-12)

## Cited by

EP0973221A1; US6228529B1

## Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

## DOCDB simple family (publication)

**WO 9305540 A1 19930318**; AT E175293 T1 19901115; AT E296485 T1 20050615; AU 2597392 A 19930405; AU 667196 B2 19960314; CA 2118705 A1 19930318; CA 2118705 C 19990907; DE 69228076 D1 19990211; DE 69228076 T2 19990520; DE 69233514 D1 20050630; DE 69233514 T2 20051110; DK 0664054 T3 19990830; EP 0664054 A1 19950726; EP 0664054 A4 19950308; EP 0664054 B1 19981230; EP 0887873 A2 19981230; EP 0887873 A3 20000426; EP 0887873 B1 20050525; ES 2124741 T3 19990216; GR 3029567 T3 19990630; JP H07500943 A 19950126; US 5198313 A 19930330

## DOCDB simple family (application)

**US 9207653 W 19920909**; AT 92920185 T 19920909; AT 98201996 T 19920909; AU 2597392 A 19920909; CA 2118705 A 19920909; DE 69228076 T 19920909; DE 69233514 T 19920909; DK 92920185 T 19920909; EP 92920185 A 19920909; EP 98201996 A 19920909; ES 92920185 T 19920909; GR 990400651 T 19990304; JP 50549893 A 19920909; US 75744791 A 19910910